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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,934

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Wolf Steffens

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2272

7590 11/19/2007
Paul D Greeley
Ohlandt Greeley Ruggiero & Perle
10th Floor
One Landmark Square
Stamford, CT 06901-2682

EXAMINER

LEE, HWA S

ART UNIT

PAPER NUMBER

2886

MAIL DATE

DELIVERY MODE

11/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

EF

Office Action Summary

Application No.

10/530,934

Applicant(s)

STEFFENS ET AL.

Examiner

Andrew Hwa S. Lee

Art Unit

2886

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>4/11/05</u> | 6) <input type="checkbox"/> Other: _____ |

1 DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. It is unclear if the interferometer is performing the "monitoring" or if the interferometer is monitored.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 23 and 26-28 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a first, second, and third coupler, optical signal etc, does not reasonably provide enablement for fifth, sixth, and seventh detector, and a fourth optical source. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Applicant is asked to thoroughly review all the claims for similar oversights.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 6-16 and 17-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims appear to have been renumbered incorrectly in the preliminary amendment. An example of the resulting errors are listed below. However, the Applicant is asked to thoroughly review all the claims for proper antecedent basis and proper support in the specification.

6. Claim 6 recites a second resulting interference signal that results from the same signals that are used to create the first resulting interference signal. The claim is unclear how two different resulting interference signals are created from the same signals.

7. Claim 7 recites a third resulting interference signal without reciting a second resulting interference signal.

8. Claim 15 recites the limitation "the useful optical signal". There is insufficient antecedent basis for this limitation in the claim.

9. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

10. Claim 21 recites the limitation "the second coupler" and "the second optical signal". There is insufficient antecedent basis for this limitation in the claim.

11. Claim 23, and 26-28 recite limitations such as "a third coupler", "a third optical signal", "a fifth detector", and "a third locking circuit" without establishing a second coupler, second optical signal, etc.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1, 17, 19, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Hill et al. (US 5,764,362).

Hill et al show an interferometric method of measuring refractive index comprising:

coupling a first optical signal (13) into the interferometer (60) and into a wavelength reference element (60b),

detecting (45) a first resulting interference signal being a result of interference of parts of the first optical signal in the interferometer,

detecting (45b) a resulting reference signal of the wavelength reference element, the resulting reference signal being a result of interaction of the first optical signal with the wavelength reference element, and

comparing (99) the first resulting interference signal with the resulting reference signal to detect a drift (column 11, line 55-56) of the interferometer, if any.

With respect to claim 19, Hill shows a second detector (46).

With respect to claim 23, Hill shows a third coupler (9).

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14. Claims 1, 6, and 17 rejected under 35 U.S.C. 102(b) as being anticipated by Wildnauer (US 6,421,120). Wildnauer shows an extended wavelength calibration reference in Figure 3 comprising:

coupling a first optical signal (110) into the interferometer (160) and into a wavelength reference element (130),

detecting (170) a first resulting interference signal being a result of interference of parts of the first optical signal in the interferometer,

detecting (140) a resulting reference signal of the wavelength reference element, the resulting reference signal being a result of interaction of the first optical signal with the wavelength reference element, and

comparing ("calibrating") the first resulting interference signal with the resulting reference signal to detect a drift of the interferometer, if any.

Remarks:

The use of "for" (e.g. "coupler for coupling a second optical signal") and "designed for" do not have patentable weight for claims drawn to structure (claims 17-28).

The use of "for" merely states the intended use of the claimed part (e.g. coupler, detector, locking circuit). It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art apparatus, thus satisfying the claimed structural limitations. *Ex Parte Masham*, 2 USPQ F.2d 1647 (1987).

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The use of “designed for” do not define structure. Similar to “for” it merely implies intended use since the “design” has not be structurally defined in the claims.

Allowable Subject Matter

15. Claims 2-5 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

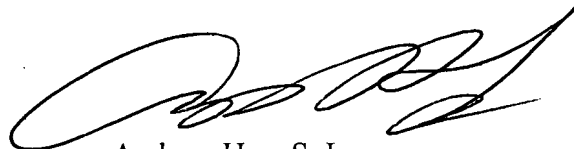
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Hwa S. Lee whose telephone number is 571-272-2419. The examiner can normally be reached on Tue-Fr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur R. Chowdhury can be reached on 571-272-2800. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Andrew Hwa S. Lee', with a large, sweeping initial 'A'.

Andrew Hwa S. Lee
Primary Examiner
Art Unit 2886